

Arizona's Childhood Lead Poisoning Targeted Screening Plan

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Arizona
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January 2003
Bureau of Epidemiology and Disease Control Services
Office of Environmental Health
Investigation and Surveillance Section

Arizona
Department of
Health Services





Janet Napolitano, Governor
State of Arizona

Catherine R. Eden, Director
Arizona Department of Health Services

ARIZONA DEPARTMENT OF HEALTH SERVICES
Bureau of Epidemiology and Disease Control Services

Office of Environmental Health
Investigation and Surveillance Section
3815 North Black Canyon Highway
Phoenix, Arizona 85015
1-800-367-6412

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Executive Summary

In 1991, the Centers for Disease Control and Prevention statement *Preventing Lead Poisoning in Young Children*¹ redefined elevated blood lead levels (EBLLs) as those ≥ 10 $\mu\text{g/dL}$ and recommended a new set of guidelines for the treatment of lead levels ≥ 15 $\mu\text{g/dL}$. Universal screening was recommended for children 9 to 72 months of age except in communities with sufficient data to conclude that children would not be at risk of exposure. Because there were few community-based data, the 1991 CDC statement essentially called for universal screening.

Since publication of the 1991 CDC statement, epidemiological studies and lead poisoning prevention programs in many states have found that targeted (selective) screening is more appropriate than universal screening.²⁻⁷ In consideration of these data; the CDC revised its guidelines in 1997.

The revised guidelines provide, for the first time, a basis for the Arizona Department of Health Services to decide on an appropriate screening policy using local lead poisoning data and housing data collected by the US Bureau of the Census. This strategy is intended to increase the screening and follow-up care of children who most need these services, to ensure that high risk children are screened, to ensure that prevention approaches are appropriate to Arizona, and to reduce unnecessary testing of children unlikely to be exposed to lead.

The 1997 CDC guidelines are a response to poor screening of high-risk children and to concerns about wasting resources by universal screening in low-risk settings.⁸ The 1997 CDC publication provides comprehensive guidance for developing a screening policy based on local blood lead and housing age data. The goal of the new CDC screening recommendations is to ensure that children at risk of exposure to lead are tested.

Lead has adverse effects on nearly all organ systems in the body. It is especially harmful to the developing brains and nervous systems of children under the age of 6 years. At very high blood lead levels, children can have severe brain damage or even die. At blood lead levels as low as 10 micrograms per deciliter ($\mu\text{g/dL}$), children's intelligence, hearing, and growth are affected. This damage can be stopped if a child's lead exposure is reduced. Studies are being done to determine if the damage can be reversed.

The Arizona Department of Health Services maintains the lead exposure registry for Arizona. The program develops lead poisoning prevention programs, investigates cases with elevated blood lead levels, and conducts educational outreach activities.

Laboratories and health care providers reported 163 children with lead poisoning (≥ 10 $\mu\text{g/dL}$) in 2001. Lead-based paint in older homes continues to be a significant remaining source of lead poisoning for children in Arizona. The older the home, the more likely it is to contain lead based paint that can be a source of lead poisoning. Homes built before 1960 are the most likely to be a potential source for lead poisoning. Home remedies and take-home exposure were other lead sources that were identified during environmental investigations.

The CDC publication, *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials*, lists six steps that state public health agencies should follow in the policy development activity of developing and implementing a statewide targeted blood lead testing plan. These six steps are:

- Form an advisory committee;
- Assess lead exposure and blood lead testing capacity;
- Determine the boundaries of the recommendation areas;
- Decide on appropriate blood lead testing;
- Write the blood lead testing recommendations; and
- Implement the statewide plan.

The Lead Poisoning Screening Coalition was organized using the CDC publication, *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials*. The coalition was directed to examine prevalence and the risk factors for lead poisoning in Arizona. The analysis included:

- An assessment of the incidence and prevalence of lead poisoning in Arizona;
- An evaluation of the effectiveness of current childhood lead screening efforts and voluntary options and alternatives to increase lead screening;
- A review of current federal, state, and local laws, rules and regulatory programs, including standards and other requirements associated with federal, state, and local housing programs;
- An effort to identify opportunities to enhance medical assistance to address lead poisoning prevention, screening, medical case management, and environmental remediation;
- An evaluation of the availability and effectiveness of current resources, programs, and efforts to address lead poisoning in children; and
- A consideration of the findings and recommendations of Healthy Arizona 2010 Elimination Plan relating to lead poisoned children.

The 1997 CDC guidance recommends that blood lead data, housing data, demographic data on children, and data on the presence of other sources of lead be used to assess lead exposure in the state in order to determine whether targeted screening is appropriate.

The Arizona Department of Health Services and the Coalition used available lead poisoning prevalence rates and pre-1960 housing data for each ZIP code to develop a Lead Poisoning Risk Index for each ZIP code in Arizona.

The following table displays the results of the ZIP codes considered being at high risk for Lead Poisoning.

MARICOPA	85003	PHOENIX
	85004	PHOENIX
	85006	PHOENIX
	85007	PHOENIX
	85008	PHOENIX
	85009	PHOENIX
	85012	PHOENIX
	85013	PHOENIX
	85014	PHOENIX
	85015	PHOENIX
	85016	PHOENIX
	85017	PHOENIX
	85018	PHOENIX
	85019	PHOENIX
	85020	PHOENIX
	85021	PHOENIX
	85031	PHOENIX
	85032	PHOENIX
	85034	PHOENIX
	85040	PHOENIX
	85041	PHOENIX
	85329	CASHION
	85353	TOLLESON
	85354	TONOPAH
	85363	YOUNGTOWN
	85390	WICKENBURG

PIMA	85321	AJO
	85619	MOUNT LEMMON
	85633	SASABE
	85634	SELLS
	85639	TOPAWA
	85701	TUCSON
	85705	TUCSON
	85708	TUCSON
	85711	TUCSON
	85713	TUCSON
	85714	TUCSON
	85716	TUCSON
	85719	TUCSON
	85735	TUCSON

COCHISE	85603	BISBEE
	85605	BOWIE
	85607	DOUGLAS
	85608	DOUGLAS
	85610	ELFRIDA
	85613	FORT HUACHUCA
	85617	MCNEAL
	85627	POMERENE
	85630	ST DAVID
	85638	TOMBSTONE
	85643	WILLCOX

PINAL	85228	COOLIDGE
	85237	KEARNY
	85241	PICACHO
	85245	RED ROCK
	85272	STANFIELD
	85273	SUPERIOR
	85623	ORACLE
	85631	SAN MANUEL

YAVAPAI	85362	YARNELL
	86301	PRESCOTT
	86303	PRESCOTT
	86324	CLARKDALE
	86331	JEROME
	86337	SELIGMAN

YUMA	85333	DATELAND
	85347	ROLL
	85349	SAN LUIS
	85350	SOMERTON
	85356	WELLTON
	85364	YUMA

APACHE	85927	GREER
	85932	NUTRIOSO
	85936	ST JOHNS
	86507	LUKACHUKAI

COCONINO	86015	BELLEMONT
	86022	FREDONIA
	86046	WILLIAMS

GILA	85235	HAYDEN
	85501	GLOBE
	85539	MIAMI

GRAHAM	85531	CENTRAL
	85536	FORT THOMAS
	85543	PIMA
	85546	SAFFORD
	85552	THATCHER

GREENLEE	85534	DUNCAN
	85540	MORENCI
	85922	BLUE

MOHAVE	86433	OATMAN
	86437	VALENTINE
	86438	YUCCA

NAVAJO	86039	KYKOTSMOVI VLG
	86042	POLACCA
	86043	SECOND MESA
	86047	WINSLOW

SANTA CRUZ	85611	ELGIN
	85621	NOGALES
	85640	TUMACACORI

Glossary

According to the CDC publication, *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials*, November 1997:

- **Screening Test:** a laboratory test for lead that is performed on the blood of an asymptomatic child to determine whether the child has an elevated blood lead level. Screening should be done by a blood lead measurement of either a venous or capillary (fingerstick) blood specimen.
- **Blood Lead Level (BLL):** the concentration of lead in a sample of blood. This concentration is usually expressed in micrograms per deciliter or micromoles per liter.
- **Diagnostic Test:** the first venous blood lead test performed within 6 months on a child who has previously had an elevated blood lead level (BLL) on a screening test.
- **Targeted Screening:** the blood lead level (BLL) screening of some, but not all, children in a recommendation area. The selection of children to be screened is based on the presence of a factor that places these children at increased risk for lead exposure.
- **Personal-Risk Questionnaire:** May be used as a tool in conducting an individual risk evaluation in order to help identify children who should receive blood lead level (BLL) screening.

Introduction

The principal federal recommendations on screening young children for lead poisoning are issued by the Centers for Disease Control and Prevention (CDC); the current guidance was published in November 1997 in a document called *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials*. State health departments and their partners are encouraged to develop formal childhood lead poisoning screening plans that reflect local conditions.

The Arizona Department of Health Services and the Childhood Lead Poisoning Screening Coalition selected a policy that recommends a geographic targeted lead screening approach that focuses blood lead testing resources on Arizona children who are at higher risk for lead poisoning. This plan also supports the Arizona Health Care Cost Containment System (AHCCCS) requirement of testing all enrolled children. Federal law specifically requires lead screening “as appropriate for age and risk factors” for all children enrolled in Medicaid. The screening provision is part of the mandatory package of preventative health services called “Early and Periodic Screening, Diagnostic and Treatment Services” (or EPSDT).

The Arizona Plan

- **All children living in targeted ZIP codes should have a blood lead test at 12 and 24 months of age. Children aged 36 to 72 months should be tested if they have not been previously tested.**
- **All children covered by the Arizona Health Care Cost Containment System (AHCCCS) should be tested according to the Centers for Medicare and Medicaid Services (CMS) requirements, as follows: test all children at 12 and 24 months of age; test children at 36 to 72 months of age if they have not been previously tested.**
- **For children not living in a targeted ZIP code area, health care providers should conduct an individual risk evaluation in order to determine whether those children are at increased risk of having an elevated blood lead level (BLL).**

Targeted Screening Policy Background

In 1991, the Centers for Disease Control and Prevention statement *Preventing Lead Poisoning in Young Children*¹ redefined elevated blood lead levels (BLLs) as those ≥ 10 $\mu\text{g/dL}$ and recommended a new set of guidelines for the treatment of lead levels ≥ 15 $\mu\text{g/dL}$. Universal screening was recommended for children 9 to 72 months of age except in communities with sufficient data to conclude that children would not be at risk of exposure. Because community-based data were relatively absent, the 1991 CDC statement essentially called for universal screening.

Since publication of the 1991 CDC statement, epidemiological studies and lead poisoning prevention programs in many states have found that targeted (selective) screening is more appropriate than universal screening.²⁻⁷ In consideration of these data; the CDC revised its guidelines in 1997.

The revised guidelines provide, for the first time, a basis for the Arizona Department of Health Services to decide on an appropriate screening policy using local lead poisoning data and housing data collected by the US Bureau of the Census. This strategy is intended to increase the screening and follow-up care of children who most need these services, to ensure that high risk children are screened, to apply prevention approaches are appropriate to Arizona, and to reduce testing of children unlikely to be exposed to lead.

The 1997 CDC guidelines are a response to poor screening of high-risk children as well as concerns about wasting resources by universal screening in low-risk settings.⁸ The 1997 CDC publication provides comprehensive guidance for developing a screening policy based on local blood lead and housing age data. The goal of the new CDC screening recommendations is to ensure that children at risk of exposure to lead are tested.

The CDC guidance recommends targeted screening in communities or states where less than 12% of children have lead poisoning and where 27% or fewer of houses were built before 1950. This recommendation is based partially on an analysis suggesting that the benefits of universal screening outweigh the costs only when the prevalence of lead poisoning is in the range of 11% to 14% or higher.⁸ Lead poisoning rates in Arizona meet these criteria for development of a targeted screening plan.

Effects from Lead Poisoning

Lead has adverse effects on nearly all organ systems in the body. It is especially harmful to the developing brains and nervous systems of children under the age of 6 years. At very high blood lead levels, children can suffer severe brain damage or die. At blood lead levels as low as 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$), children's intelligence, hearing, and growth are affected. This damage can be stopped if a child's lead exposure is reduced. Studies are being conducted to determine if this damage can be reversed.

A child is considered to be physiologically lead-poisoned at a blood lead level equal to 10 $\mu\text{g}/\text{dL}$ or greater. The Centers for Disease Control and Prevention chose this level because it is the level at which health effects become significant. In addition, at this level, CDC recommends that action be taken to keep the blood lead level from increasing. In 1991, the CDC estimated that the average benefit of preventing a child's blood lead level from rising above 24 $\mu\text{g}/\text{dL}$ was \$1,300 in medical and public health case management costs, and \$3,331 in special education costs. A Health and Human Services advisory group and the National Academy of Sciences are examining research concluding that even tiny amounts of lead hinder children's intelligence.

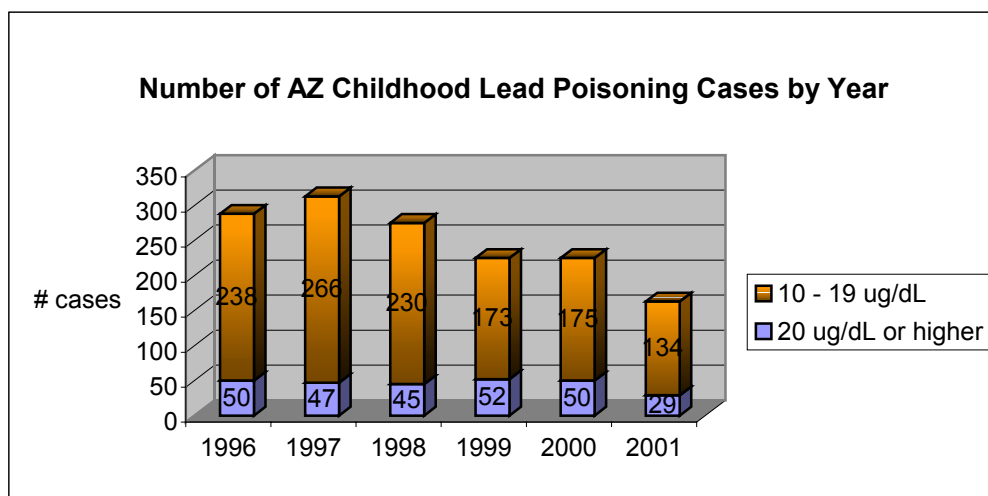
A number of studies have estimated that a child's IQ will drop by one to three points for every increase of 10 $\mu\text{g}/\text{dL}$ in the child's blood lead level. In a community, the presence of lead-poisoned children can be associated with an increase in the number of children with developmental deficits and learning disorders. As a result, this places an

unnecessary and expensive burden on the educational system. According to the CDC publication, *Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention, March 2002*, the presence of lead-poisoned children also requires substantial community public health resources for medical and environmental case management services.⁹

Lead Poisoning Cases in Arizona

The Arizona Department of Health Services (ADHS) Lead Poisoning Prevention Program maintains the lead exposure registry for Arizona. In addition, the program develops lead poisoning prevention approaches, investigates cases with elevated blood lead levels, and conducts educational outreach activities.

Laboratories and health care providers reported 163 children with lead poisoning (≥ 10 ug/dL) in 2001. Figure 1 displays the number of childhood lead poisoning cases for 1996 to 2001. Eighty-two percent (82%) of the childhood cases (134 cases) were in the lower ranges of lead poisoning (10 to < 20 ug/dL). The remaining eighteen percent (18%) of the childhood cases (29 cases) were in the moderate to severe range of lead poisoning (≥ 20 ug/dL). Numbers may show a decrease due to reporting limitations.

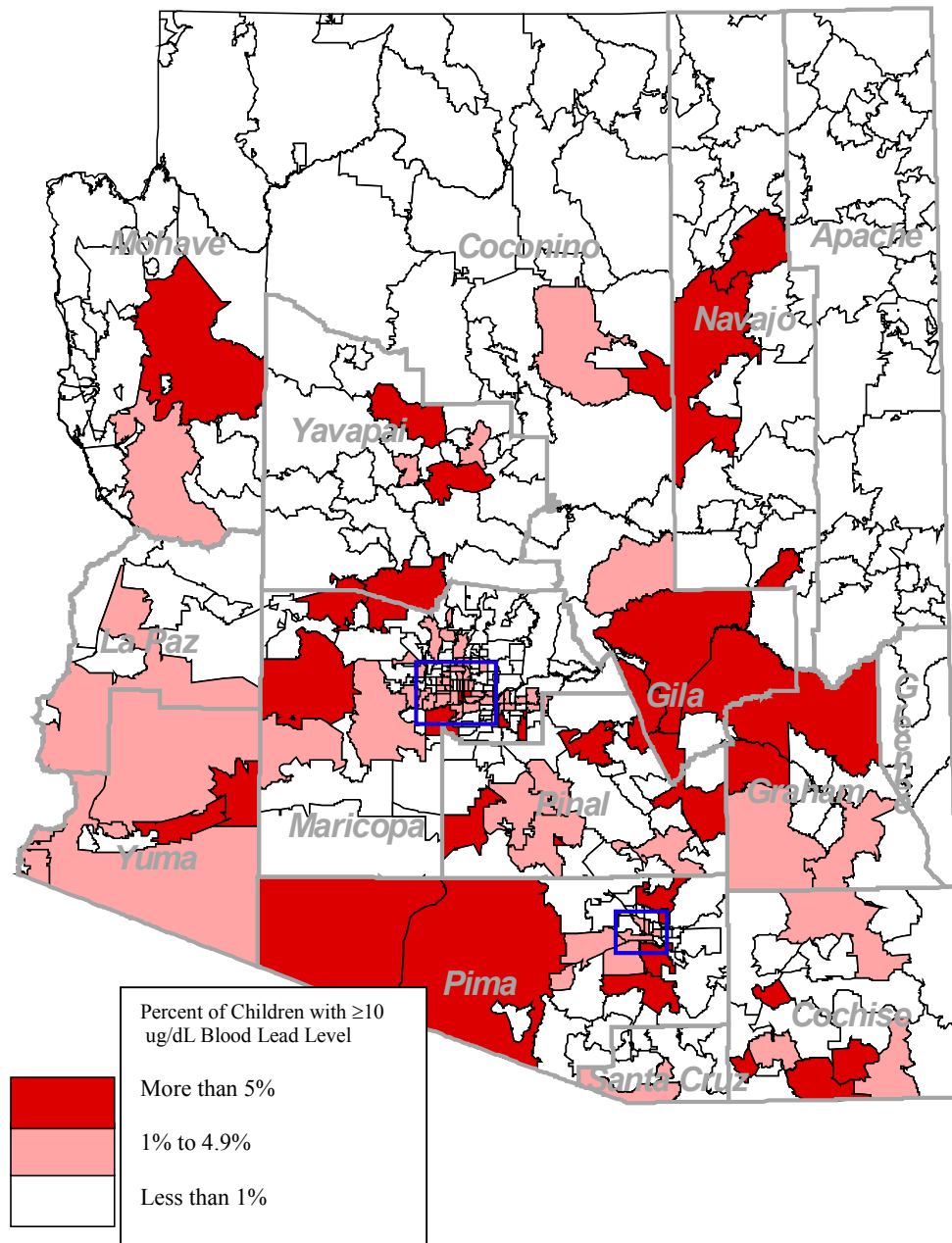


Approximately 79% of lead poisoning cases were Hispanic. It is not known whether the disproportionate number of Hispanic cases was the result of socioeconomic factors, sampling bias, a random effect, or an unidentified risk factor. The over-representation of Hispanic children persisted in the group of children reported to have blood levels of ≥ 20 ug/dL.

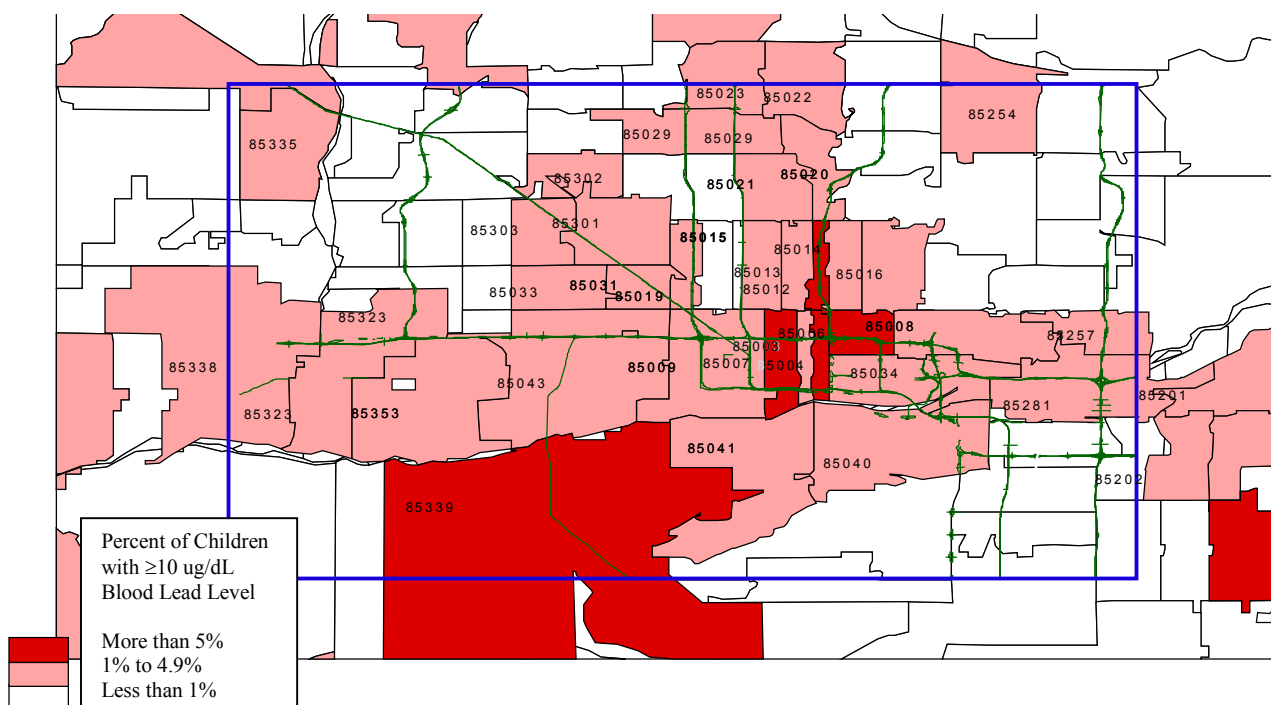
Lead Poisoning Exposure

Lead-based paint in older homes continues to be a significant remaining source of lead poisoning for children in Arizona. The older the home, the more likely it is to contain lead based paint that can be a source of lead poisoning. Homes built before 1960 are the most likely to be a potential source for lead poisoning. Home remedies and take-home exposure were other lead sources identified during environmental investigations.

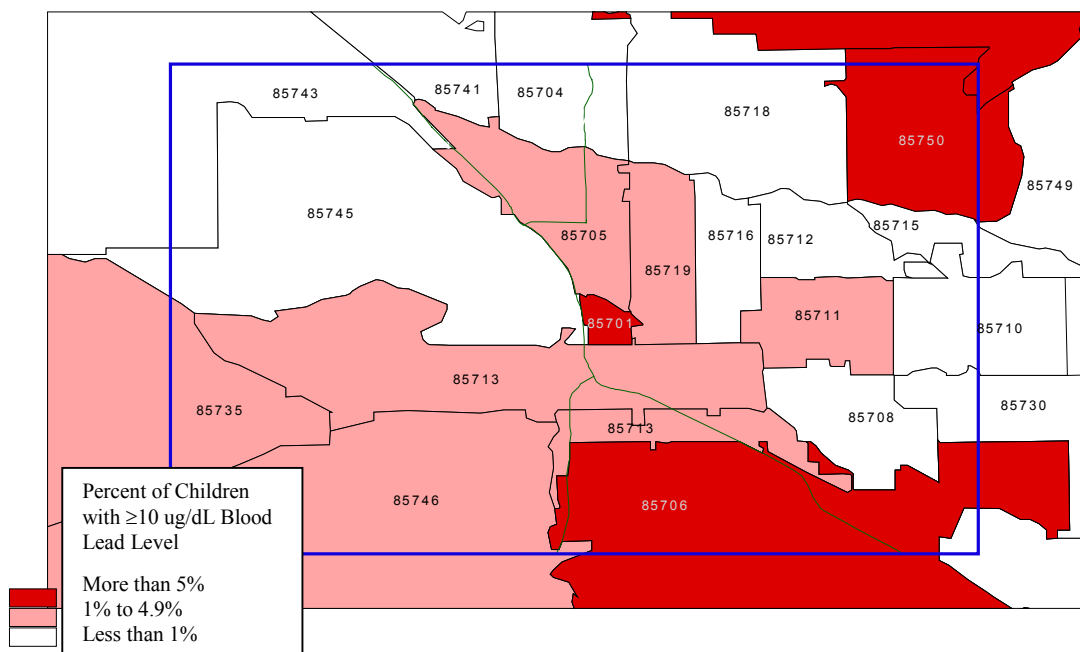
**Statewide Lead Poisoning Prevalence Rates - Children Enrolled in AHCCCS Who
Had a Blood Lead Test (n = 53,095 total tested)
1998 - 2000**



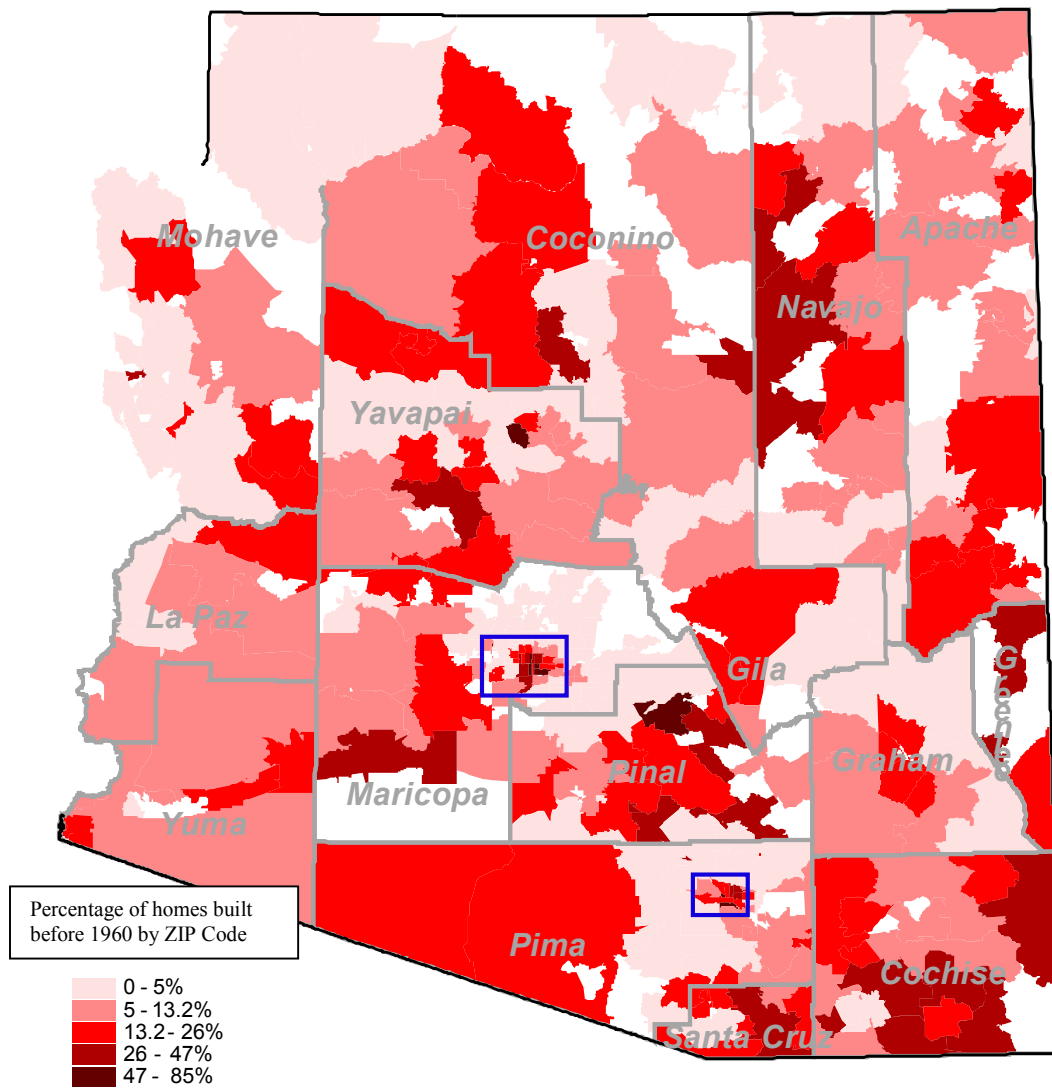
Greater Phoenix Area Lead Poisoning Prevalence Rates - Children Enrolled in AHCCCS Who Had a Blood Lead Test 1998 – 2000



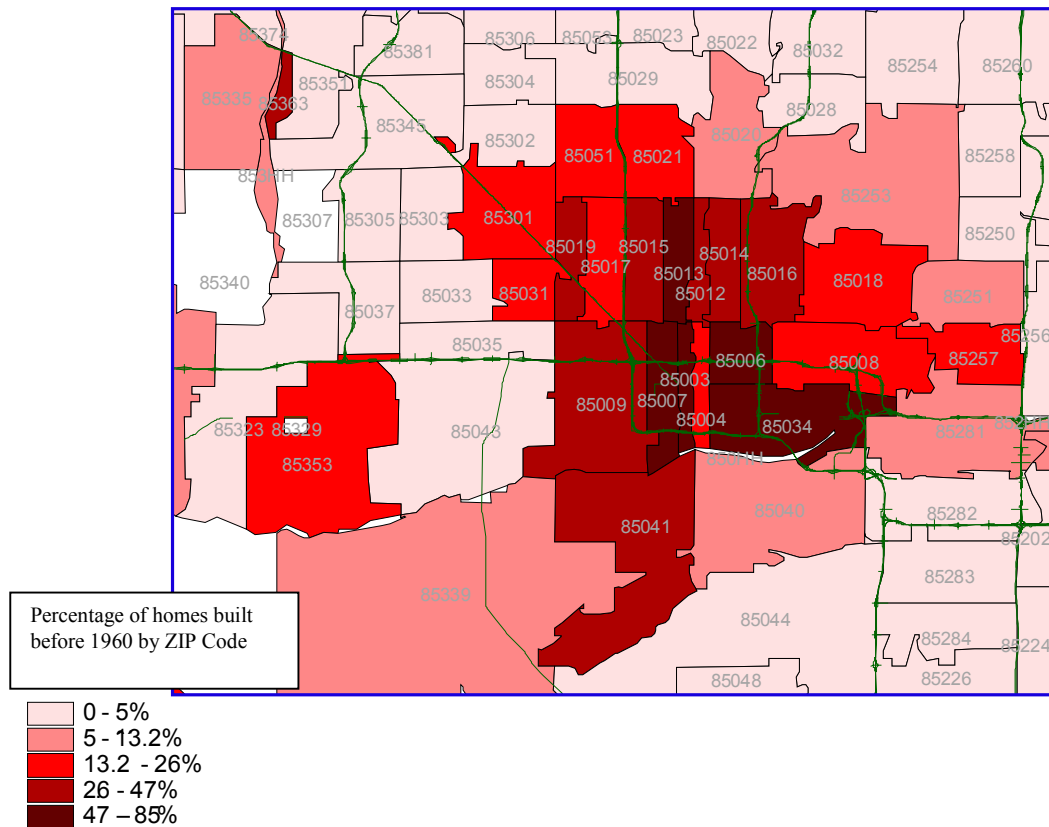
Tucson Area Lead Poisoning Prevalence Rates - Children Enrolled in AHCCCS Who Had a Blood Lead Test 1998 – 2000



**Statewide Percentage of Homes Built before 1960 by ZIP Code
(Based on 2000 Census Data)**



Phoenix Area Percentage of Homes Built before 1960 by ZIP Code (Based on 2000 Census Data)



Screening Plan Development Method

The CDC publication, *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials*, lists six steps that state public health agencies should follow in the policy development activity of developing and implementing a statewide targeted blood lead testing plan. These six steps are:

- Form an advisory committee;
- Assess lead exposure and blood lead testing capacity;
- Determine the boundaries of the recommendation areas;
- Decide on appropriate blood lead testing;
- Write the blood lead testing recommendations; and
- Implement the statewide plan.

This following section describes the process that the Arizona Department of Health Services (ADHS) used to develop Arizona's statewide blood lead testing plan and the plans for ADHS implementation.

Lead Poisoning Screening Coalition Activities

The CDC publication, *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials*, states the following: "State health officials should form an advisory committee to develop the statewide plan. The committee should include child health-care providers as well as representatives from local health departments, managed-care organizations, Medicaid, private insurance organizations, and the community."

The Lead Poisoning Screening Coalition was organized using the above criteria. The table in the Appendix identifies the members of the Coalition. The coalition was directed to examine prevalence and the risk factors for lead poisoning in Arizona. The analysis included:

- An assessment of the incidence and prevalence of lead poisoning in Arizona;
- An evaluation of the effectiveness of current childhood lead screening efforts and voluntary options and alternatives to increase lead screening;
- A review of current federal, state, and local laws, rules and regulatory programs, including standards and other requirements associated with federal, state, and local housing programs;
- An effort to identify opportunities to enhance medical assistance to address lead poisoning prevention, screening, medical case management, and environmental remediation;
- An evaluation of the availability and effectiveness of current resources, programs, and efforts to address lead poisoning in children; and
- A consideration of the findings and recommendations of Healthy Arizona 2010 Elimination Plan relating to lead poisoned children.

Lead Exposure and Testing Capacity

The 1997 CDC guidance recommends that blood lead data, housing data, demographic data on children, and data on the presence of other sources of lead be used to assess lead exposure in the state in order to determine whether targeted screening is appropriate.

The following CDC evaluation criteria were analyzed to evaluate whether Arizona blood lead data is adequate to develop a targeted screening plan:

- Laboratory data are available for children who have been tested. Arizona data meet this criterion.
- Laboratory data are of good quality. Arizona data meet this criterion.
- Demographic, socioeconomic, and geographic data are available for individual children. Arizona data meet this criterion.

- Testing data are representative of the pediatric population in Arizona. Based on address and AHCCCS status, it appears that both very high risk and very low risk children are being tested across the state of Arizona. In ZIP Codes where testing numbers are low, the risk of lead exposure can be estimated by reviewing pre-1960 housing. Arizona data partially meet this criterion.
- Testing data are available for a sample that is large enough to allow for a valid estimate of prevalence to be made. In ZIP Codes where testing numbers are low, the risk of lead exposure can be estimated by reviewing pre-1960 housing. Arizona data partially meet this criterion.
- Labs reporting data should be successful participants in an approved proficiency testing program. Arizona data meet this criterion.
- Blood lead level tests should be maintained in a way that allows identification of duplicate and sequential tests on a single child. It must be possible to distinguish between the number of children tested and the number of tests performed. Arizona data meet this criterion.
- The results of all tests, regardless of blood lead levels, should be available, so that calculation of rates of elevated blood lead levels among tested children can take place. Arizona data meet this criterion.
- The data should be representative, i.e., the demographic, socioeconomic, and geographic distribution of children screened should be similar to that of all children in the jurisdiction. Arizona data meet this criterion.

Arizona's blood lead data meet enough of these criteria to be useful in assessing the lead exposure of Arizona children.

Determining the Targeted Screening Boundaries

The Arizona Department of Health Services and the Coalition determined that the boundaries of the recommendation area should be set after considering the data. For example, if the data show a widespread and homogeneous risk of lead poisoning throughout the state, then a single recommendation should be made for the entire state of Arizona.

The results of the mapping reveal that lead poisoning prevalence is highly variable, and there are several ZIP Codes in the state that have significantly higher lead poisoning prevalence rates.

Targeted Screening Thresholds

The Arizona Department of Health Services and the Coalition used available lead poisoning prevalence rates and pre-1960 housing data for each ZIP code to develop a Lead Poisoning Risk Index for each ZIP code in Arizona.

The formula used to develop the Lead Poisoning Risk Index is as follows:

$$\text{LPRI} = \text{HI} + [\text{PI} * 10]$$

where:

LPRI = Lead Poisoning Risk Index

HI = Housing Index (Percentage of pre-1960 Housing by ZIP code)

PI = Prevalence Index (Percentage of Children Tested with Lead Poisoning by ZIP code)

The Arizona Department of Health Services and the Coalition reached consensus that the index should include age of housing and current prevalence data. The Coalition recommended that prevalence data should have an equal weight as the age of housing data in the index because of uncertainties in the prevalence rates for many ZIP codes. ZIP codes where a low percentage of the children have been screened between 1998 and 2000 have a Lead Poisoning Risk Index that includes only the percentage of housing that was built before 1960. Indices were adjusted to reflect the lack of prevalence data by multiplying the housing index (HI) by 2.

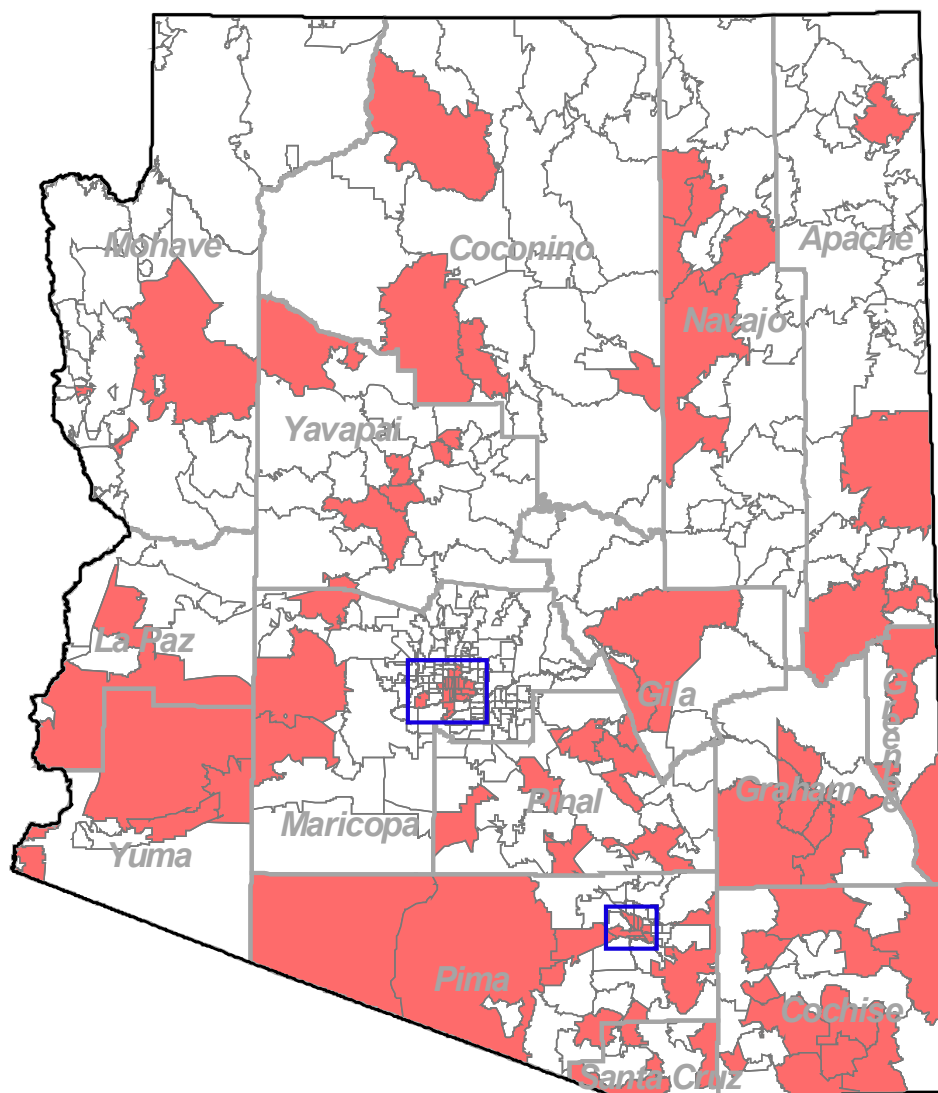
Data sources used to develop the LPRI include: 1) AHCCCS lead screening utilization reports for 1998 through 2001; 2) ADHS Registry case data from 1998 to 2001; and 3) 2000 Census data for pre-1960 housing.

The following table displays the results of the Lead Poisoning Risk Index calculations. All ZIP codes with an index score of 33 or greater are considered to be at higher risk.

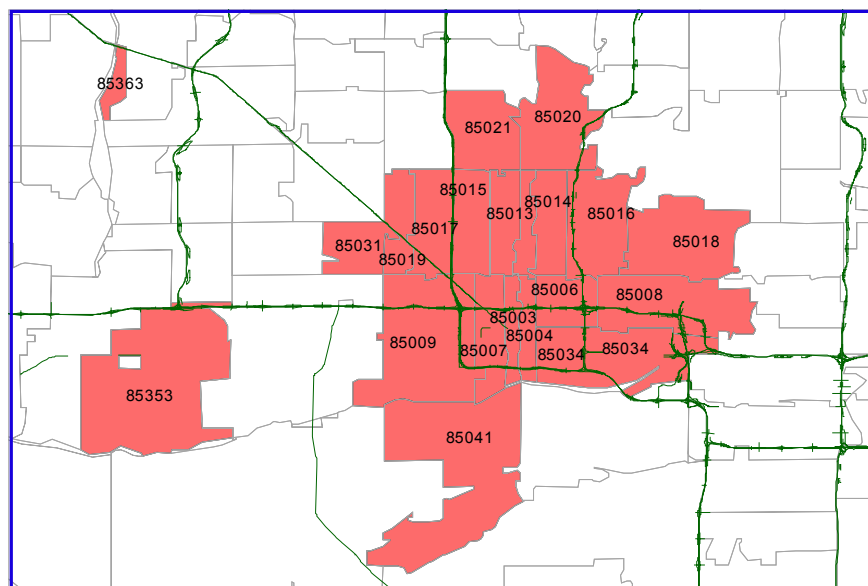
ZIP Code	City	Index Score	Number of Children 0-6 Years Old
85241	PICACHO	193	67
85617	MCNEAL	193	92
85333	DATELAND	174	105
85006	PHOENIX	140	4994
85347	ROLL	129	147
85701	TUCSON	125	274
85004	PHOENIX	125	369
85007	PHOENIX	125	2166
85273	SUPERIOR	123	284
85272	STANFIELD	120	196
85630	ST DAVID	116	199
85235	HAYDEN	110	149
86015	BELLEMONT	104	29
85539	MIAMI	97	521
85603	BISBEE	95	725
85012	PHOENIX	93	416
85013	PHOENIX	89	1928
85321	AJO	86	441
85363	YOUNGTOWN	86	131
85018	PHOENIX	84	3364
85003	PHOENIX	82	797
85714	TUCSON	78	1872
85613	FORT HUACHUCA	77	1460
85631	SAN MANUEL	76	525
85605	BOWIE	75	70
86047	WINSLOW	74	1561
85501	GLOBE	72	1271
86042	POLACCA	72	196
85349	SAN LUIS	70	1932
85638	TOMBSTONE	69	110
85540	MORENCI	69	467
85034	PHOENIX	68	1338
85245	RED ROCK	68	30
85708	TUCSON	64	1408
85711	TUCSON	62	4362
85031	PHOENIX	60	4097
85353	TOLLESON	59	849
85009	PHOENIX	59	8158
85237	KEARNY	59	305
85014	PHOENIX	55	2903
85607	DOUGLAS	55	2447
85228	COOLIDGE	54	1396
85356	WELLTON	54	351

ZIP Code	City	Index Score	Number of Children 0-6 Years Old
85015	PHOENIX	53	5887
85719	TUCSON	51	2468
85329	CASHION	51	418
85364	YUMA	50	9072
86046	WILLIAMS	50	499
86039	KYKOTSMOVI	49	264
85534	DUNCAN	49	342
85008	PHOENIX	49	8327
86043	SECOND MESA	49	239
86324	CLARKDALE	49	294
85716	TUCSON	47	2944
85621	NOGALES	47	2841
85543	PIMA	47	430
85713	TUCSON	46	5454
85350	SOMERTON	46	1702
86303	PRESCOTT	43	821
85643	WILLCOX	42	753
86507	LUKACHUKAI	42	280
85611	ELGIN	42	31
85640	TUMACACORI	42	51
86301	PRESCOTT	42	1052
85019	PHOENIX	39	3608
85016	PHOENIX	38	3309
85041	PHOENIX	38	4595
85020	PHOENIX	38	3256
85531	CENTRAL	38	49
85390	WICKENBURG	38	560
86337	SELIGMAN	37	60
85017	PHOENIX	37	6098
85021	PHOENIX	37	4092
85536	FORT THOMAS	36	32
85735	TUCSON	36	805
85936	ST JOHNS	36	446
86022	FREDONIA	35	245
85634	SELLS	34	872
85552	THATCHER	34	595
85623	ORACLE	34	362
85546	SAFFORD	34	1761
85639	TOPAWA	33	45
85705	TUCSON	33	5735
85362	YARNELL	33	54
85610	ELFRIDA	33	108

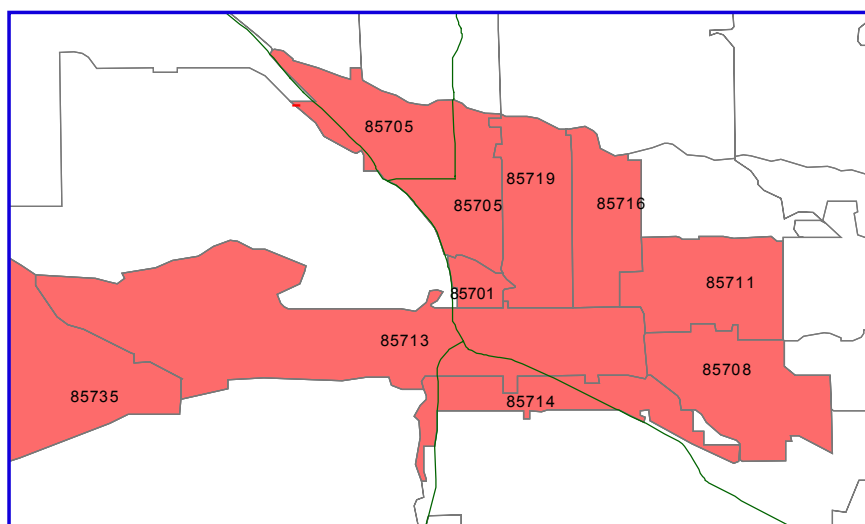
Statewide Map of ZIP Codes Targeted for Childhood Lead Poisoning Screening



Greater Phoenix Area Map of ZIP Codes Targeted for Childhood Lead Poisoning Screening



Tucson Area Map of ZIP Codes Targeted for Childhood Lead Poisoning Screening



Conclusion

Lead poisoning remains a common, yet preventable, environmental health threat in Arizona. The Centers for Disease Control and Prevention issued guidelines for state and local public health agencies that outline criteria for developing a targeted approach to blood lead screening.

The Arizona Department of Health Services and the Childhood Lead Poisoning Screening Coalition examined local data and determined that certain geographic areas present a higher risk for Arizona children becoming exposed to lead. A targeted screening plan was established to focus blood lead testing resources on the children in the state who are at higher risk for lead poisoning. This plan also supports the Arizona Health Care Cost Containment System (AHCCCS) mandatory blood lead test screening policy.

Statewide support from local public health agencies, healthcare providers, managed-care organizations, Medicaid, private insurance organizations, and the community is essential for Arizona to meet the national goal of eliminating childhood lead poisoning by the year 2010.

References

1. Centers for Disease Control and Prevention. *Preventing Lead Poisoning in Young Children: A Statement by the Centers for Disease Control, October 1991*. Atlanta, GA: US Dept of Health and Human Services; 1991
2. Robin LF, Beller M, Middaugh JP. Statewide assessment of lead poisoning and exposure risk among children receiving Medicaid Services in Alaska. *Pediatrics*. 1997;99:E91-E96. <http://www.pediatrics.org/cgi/content/full/99/4/e9>
3. Nordin JD, Rolnick SJ, Griffin JM. Prevalence of excess lead absorption and associated risk factors in children enrolled in a Midwestern health maintenance organization. *Pediatrics*. 1994;93:172-177
4. Tejada DM, Wyatt DD, Rostek BR, Solomon WB. Do questions about lead exposure predict elevated lead levels? *Pediatrics*. 1994;93:192-194
5. Binns HJ, LeBailly SA, Poncher J, Kinsella TR, Saunders SE. Is there lead in the suburbs? Risk assessment in Chicago suburban pediatric practices. Pediatric Practice Research Group. *Pediatrics*. 1994;93:164-171
6. Snyder DC, Mohle-Boetani JC, Palla B, Fenstersheib M. Development of a population-specific risk assessment to predict elevated blood lead levels in Santa Clara County, California. *Pediatrics*. 1995;96:643-648
7. France EK, Gitterman BA, Melinkovich P, Wright RA. The accuracy of a lead questionnaire in predicting elevated pediatric blood lead levels. *Arch Pediatr Adolesc Med*. 1996;150:958-963
8. Centers for Disease Control and Prevention. *Screening Young Children for Lead Poisoning. Guidance for State and Local Public Health Officials*. Atlanta, GA: US Dept of Health and Human Services, Public Health Service; November 1997
^aCopies of this document can be obtained by request to Lead Poisoning Prevention Branch, Centers for Disease Control and Prevention, Mail Stop F 42, 4770 Buford Hwy, NE, Atlanta, GA 30341-3724, or by calling 770-488-7330. The document is also posted on the Internet at <http://www.cdc.gov/nceh/programs/lead/guide/1997/guide97.htm>
9. Centers for Disease Control and Prevention. *Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention*. Atlanta, GA: US Dept of Health and Human Services, Public Health Service; March 2002

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